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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,578	10/16/2006	Arup K. Sengupta	109-05	3882

23713 7590 04/02/2008

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EXAMINER	
BARRY, CHESTER T	
ART UNIT	PAPER NUMBER
1797	

MAIL DATE	DELIVERY MODE
04/02/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/551,578	SENGUPTA ET AL.	
	Examiner	Art Unit	
	CHESTER T. BARRY	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 November 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/1/06,8/16/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claims 1 – 2 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 96/07615. WO 96/07615 describes a process for removing DOC from a solution comprising a high concentration of ion exchange resin. As is well known, ion exchange resins comprise ions, thereby making them salts. The ref. also describes contacting the solution with a coagulant and/or flocculant such that the DOC becomes insoluble in the solution. The insoluble DOC is removed from the ion exchange resin-bearing solution.

Claims 1 – 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, the expression "insoluble D[issolved]O[rganic]C[arbon] is confusing for it is unclear whether the organic carbon is insoluble or dissolved.

Claims 3 – 27 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 96/07615. The ref does not appear to disclose the dependent limitations, but because each such limitation is known to have a beneficial purpose in the water treatment art, it would have been obvious to have modified the '615 process by that limitation. Per claim 4, it was widely known to separate ion exchange resins having a density greater than that of the fluid in which they are used by a settling process. Per claim 5, settled solids were known to be separated from surrounding liquid by drawing them into a conduit via vacuum or by a pump. Per claim 6 it was known to separate solids from liquid using mesh filter the pore size of which is smaller than that of the solid. Per claim

9 and 18, 19. 20, it was known to adjust the pH of treated solutions to the proper pH using acids or bases, as appropriate. It would have been obvious to have adjusted the pH because pH is a known result-effective process variable. Per claim 11 it was known to use magnetic ion exchange beads in order to accomplish separation via magnetism. Per claim 12, it would have been obvious to have used a commercially available magnetic bead such as MIEX® resin. Per claim 13 - 14, selection of any commercially available known flocculant/coagulant would have been obvious. Per claim 15-16, sodium chloride brines would have been an obvious choice because it is inexpensive and commonly employed in ion exchange processes. Per claim 17, optimization through routine experimentation would have been obvious because salt concentration is a known result-effective variable. Per claims 22-23, selection of any commonly employed acid, e.g., HCl, would have been obvious to adjust pH of a fluid. Per claim 24, it would have been obvious to use any common solid liquid separation technology, e.g., filtration, the separate coagulated DOC from the surrounding fluid. Per claim 25, any conventional filter would have been obvious, e.g., plate and frame filter. Per claims 26 - 27, it would have been obvious to have used the separated DOC as a fertilizer or soil amendment / conditioner, as this practice is very popular for disposing of activated sludge Biosolids, or to have disposed of waste solids in a more conventional manner, e.g., in a land fill.

/Chester T. Barry/

Primary Examiner, Art Unit 1797

571-272-1152